WHAT IS CLAIMED IS:

1. A semiconductor substrate device, comprising:

a first semiconductor substrate including a concave-convex surface; and

a second semiconductor substrate having an insulating film on a surface thereof,

wherein the first semiconductor substrate and the second semiconductor substrate are brought together so that the surface of the first semiconductor substrate and the insulating film provided on the surface of the second semiconductor substrate contact each other to form a cavity in the semiconductor substrate device.

2. A semiconductor substrate device according to claim 1, wherein the concave-convex surface of the first semiconductor substrate is defined by a plurality of convex portions formed at equal intervals.

3. A method for fabricating a semiconductor substrate device, comprising the steps of:

providing a resist layer having a predetermined pattern on a first insulating film on a first semiconductor substrate;

performing isotropic or anisotropic etching of the first insulating film by using the resist layer as a mask, and performing anisotropic etching of the first semiconductor substrate by using the resist layer as a mask to form a concave-convex portion in a surface of the first semiconductor substrate to provide the first semiconductor substrate with the concave-convex surface; and

removing the resist layer and the first insulating film, and then bringing the first semiconductor substrate and a second semiconductor substrate together so that the surface of the first semiconductor substrate and a second insulating film provided on a surface of the second semiconductor substrate contact each other.

4. A method according to claim 3, further comprising the step of thinning the second semiconductor substrate from a surface opposite to the surface thereof provided with the second insulating film after the step of bringing the first semiconductor substrate and the second semiconductor substrate together.

5. A method according to claim 3, wherein the anisotropic etching of the first semiconductor substrate is performed

by using KOH.

add a2

add B3